

## **813 FENCE AND GUIDERAIL**

### **813.01 BARBED WIRE**

Barbed wire shall conform to the requirements of ASTM A 121 for the coating class specified.

### **813.02 WOVEN WIRE**

Woven wire shall conform to the requirements of ASTM A 116 for the coating class specified.

### **813.03 CHAIN LINK FENCE AND GATES**

**(A) GENERAL.** All materials shall meet the requirements of AASHTO M 181. Chain link fencing covered by this specification shall be one of the following types, as defined in AASHTO M 181:

Type I: Zinc-coated steel fabric, posts, hardware, and fittings.

Type II: Aluminum-coated steel fabric and zinc coated posts, hardware, and fittings.

Type III: Aluminum-alloy fabric, posts, hardware, and fittings.

Type IV: Vinyl-coated fabric.

Type I shall be used unless otherwise specified in the contract documents.

All pipe components shall be standard weight pipe of the following nominal diameters:

Intermediate posts - 2 inches.

End, corner and pull posts - 2-1/2 inches.

**(B) SAFETY FENCE SHIELDING.** Safety fence shielding shall be chain link fence meeting 813.03(A) except as modified herein:

All posts shall be standard weight, 2-1/2 inches I.D. pipe.

Rails and braces shall be standard weight, 1-1/4 inches I.D. pipe.

Fabric shall be made of 9 gage wire, 2 x 2 inch mesh.

Plates shall meet the requirements of AASHTO M 183.

Anchor bolts shall meet the requirements of ASTM A 307, Grade A.

### **813.04 METAL BEAM RAIL**

The rail elements shall be corrugated sheet steel beams conforming to the requirements of AASHTO M 180 Class A, Type 1. Rub rails shall conform to AASHTO M 183 for galvanized or painted rails or to AASHTO M 222 for corrosion-resistant rails. Galvanizing shall be in accordance with AASHTO M 111.

### **813.05 TIMBER RAIL**

The timber rail shall be cut from the specified grade of dry, well seasoned and dressed timber block of the species specified, which shall meet the applicable requirements of AASHTO M 168.

Where preservative treatment is specified this shall conform to the requirements for "Preservative Treatments for Timber" of the AASHTO Standard Specifications for Highway Bridges. Timber preservatives shall conform to the requirements of AASHTO M 133.

### **813.06 FENCE POSTS**

**(A) WOOD POSTS.** Wood posts shall conform to the details and dimensions indicated on the plans. All wood posts shall be of sound, seasoned wood, peeled and with ends cut square or as indicated. The posts shall be straight and all knots trimmed flush with the surface. Where treated posts are specified, the kind and type of treatment shall conform to that indicated on the plans. When red cedar posts or bracing is furnished, the requirements for peeling may be omitted.

All dimension timber and lumber required for fences or gates shall be sound, straight, and free from knots, splits, and shakes. It shall be of the species and grades indicated on the plans and shall be dressed and finished on all four sides.

**(B) CONCRETE POSTS.** Concrete posts shall be made of concrete, Class A, and shall contain steel reinforcement as shown on the plans.

**(C) STEEL POSTS.** Steel posts shall be galvanized in accordance with AASHTO M 111 except that tubular steel posts shall be galvanized in accordance with ASTM A 53. Fittings, hardware, and other appurtenances not specifically covered by the plans and specifications shall be standard commercial grade, and in accordance with current standard practice.

### **813.07 GUIDERAIL POSTS**

Guiderail posts shall conform to the applicable standards contained in ARTBA Bulletin No. 268. "A Guide to Standardized Highway Barrier Rail Hardware" approved by the AASHTO-ARTBA-AGC Joint Committee.

### **813.08 BOX BEAM RAIL**

Steel beam rail elements shall conform to the requirements of ASTM A 500 Grade B or ASTM A 501 and shall be galvanized after fabrication in accordance with AASHTO M 111, except when corrosion resistant steel rail elements are specified. In which case rail elements shall be made of steel meeting the dimensional and mechanical requirements of ASTM A 500 or ASTM A 501 and having an atmospheric corrosion resistance approximately two times that of carbon structural steel with copper and shall not be painted or galvanized.